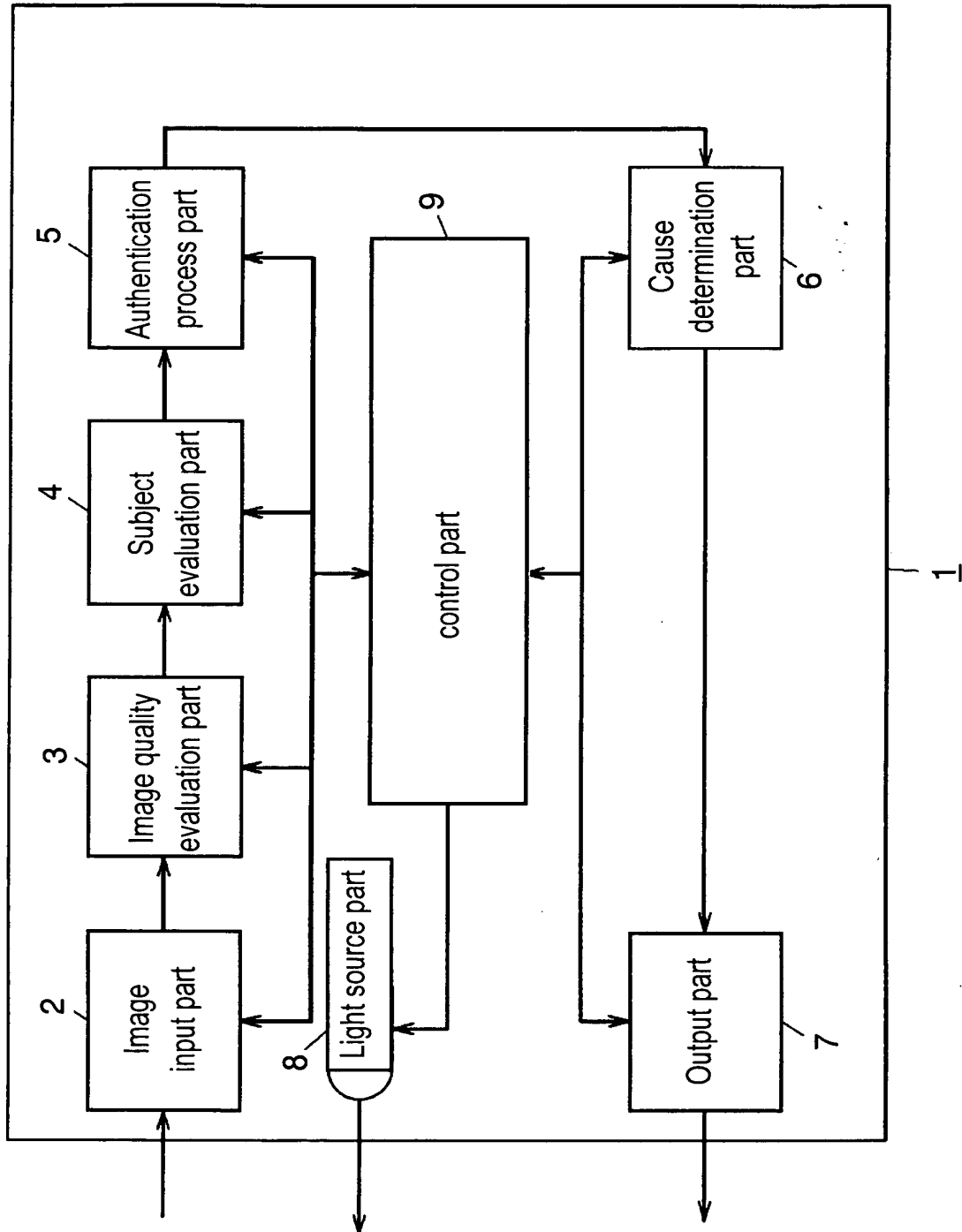


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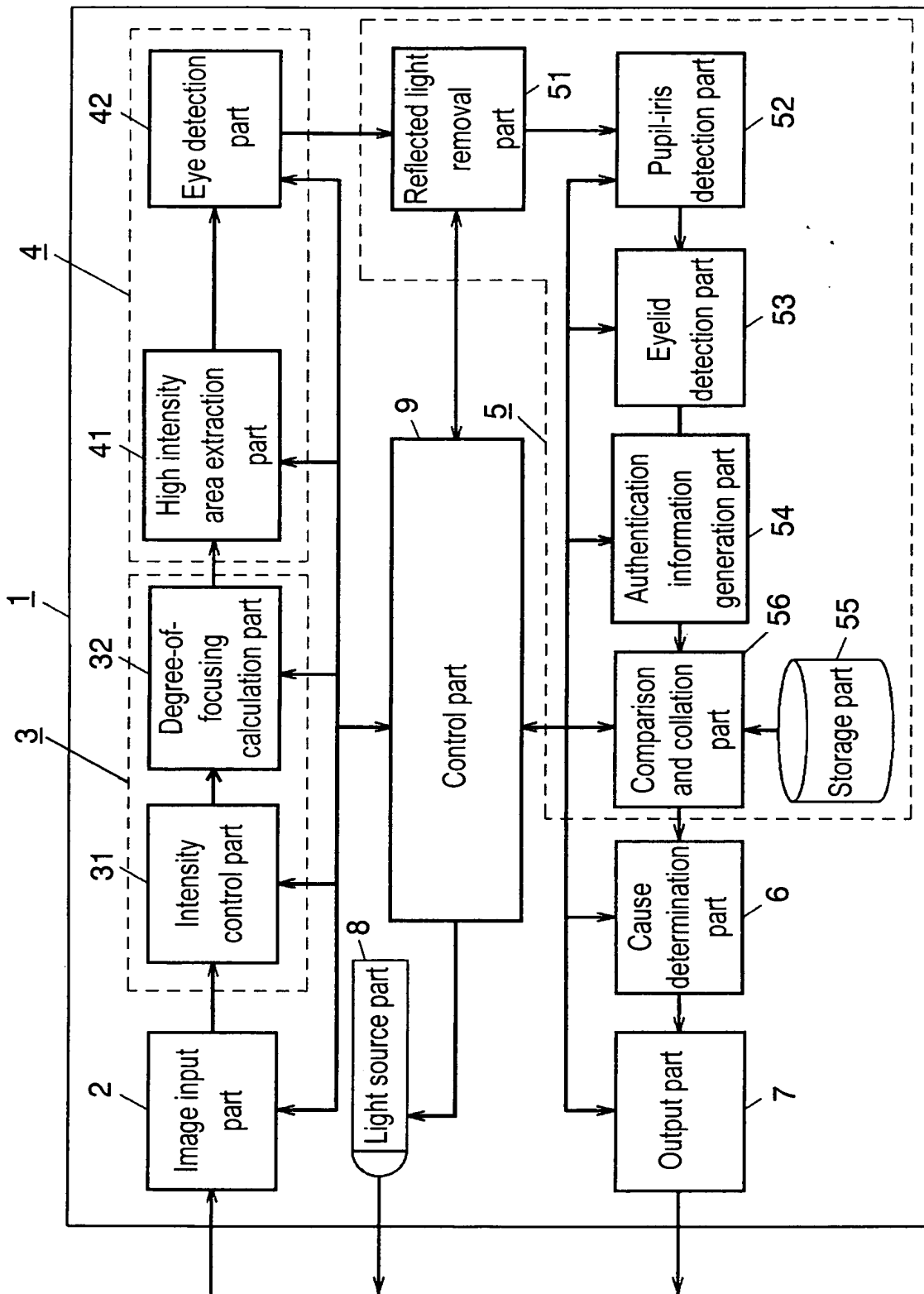
FIG. 1



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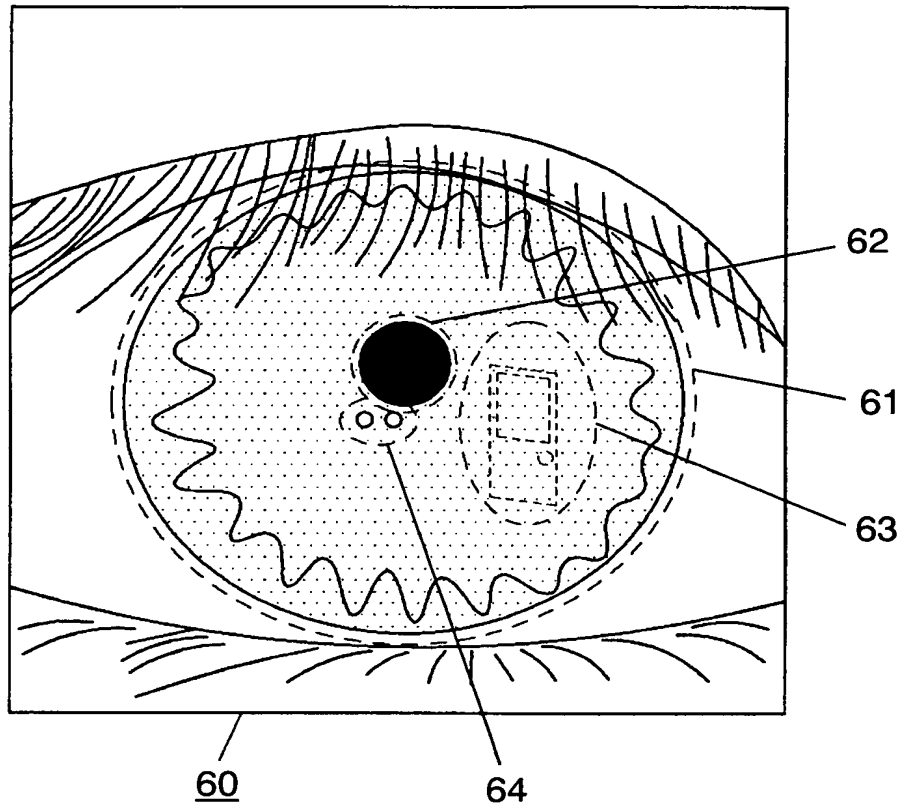
FIG. 2



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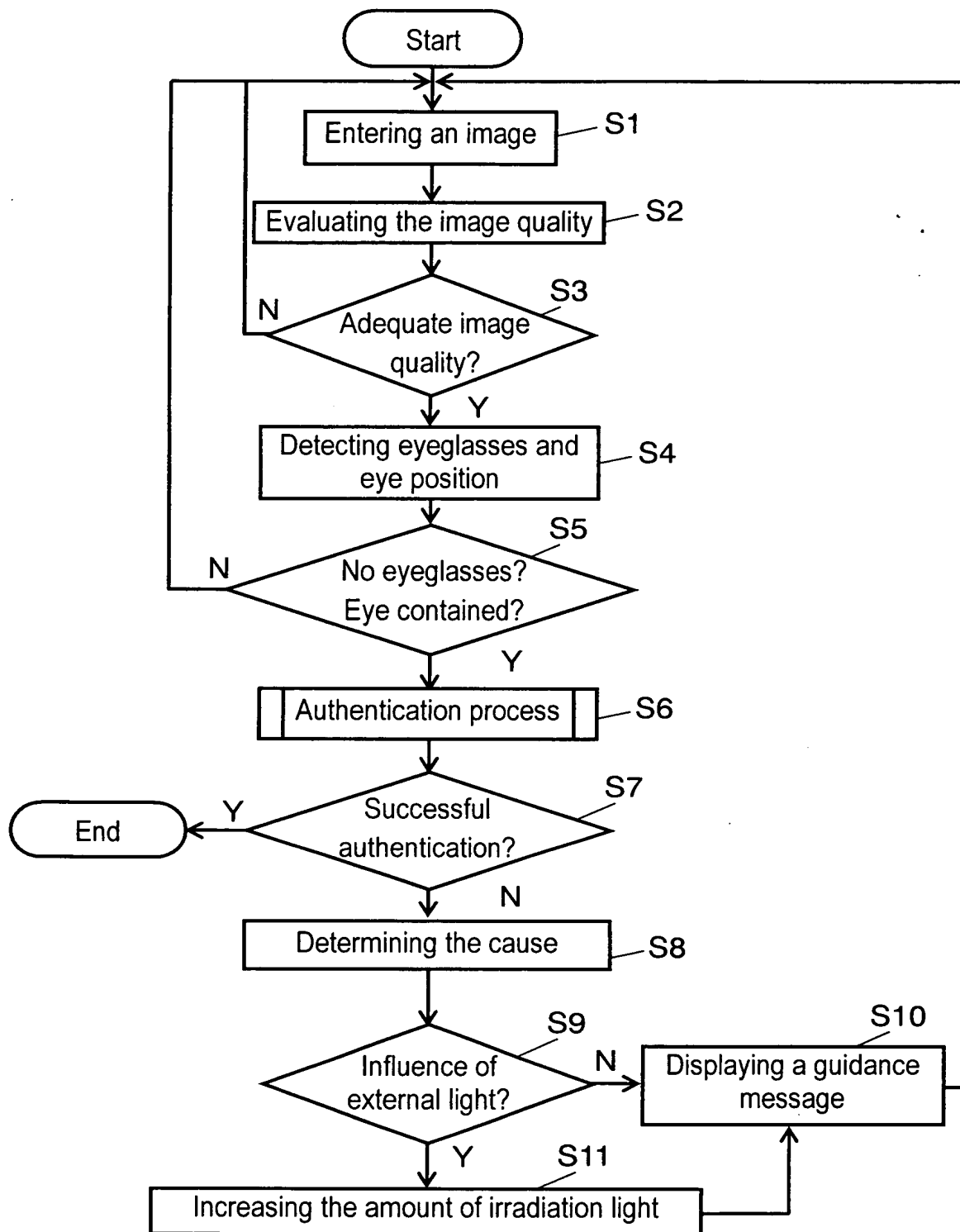
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FIG. 3



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FIG. 4



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FIG. 5



FIG. 6

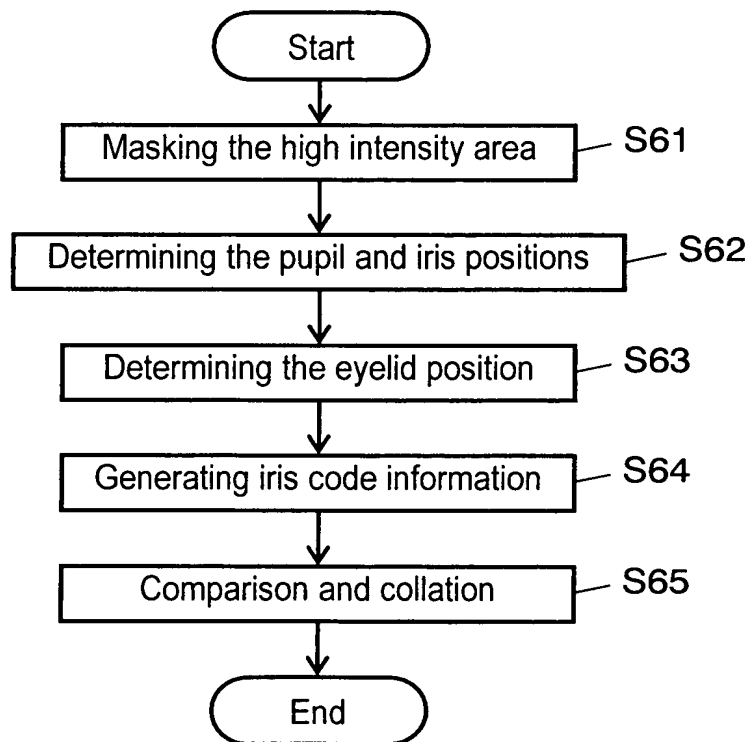


FIG. 7

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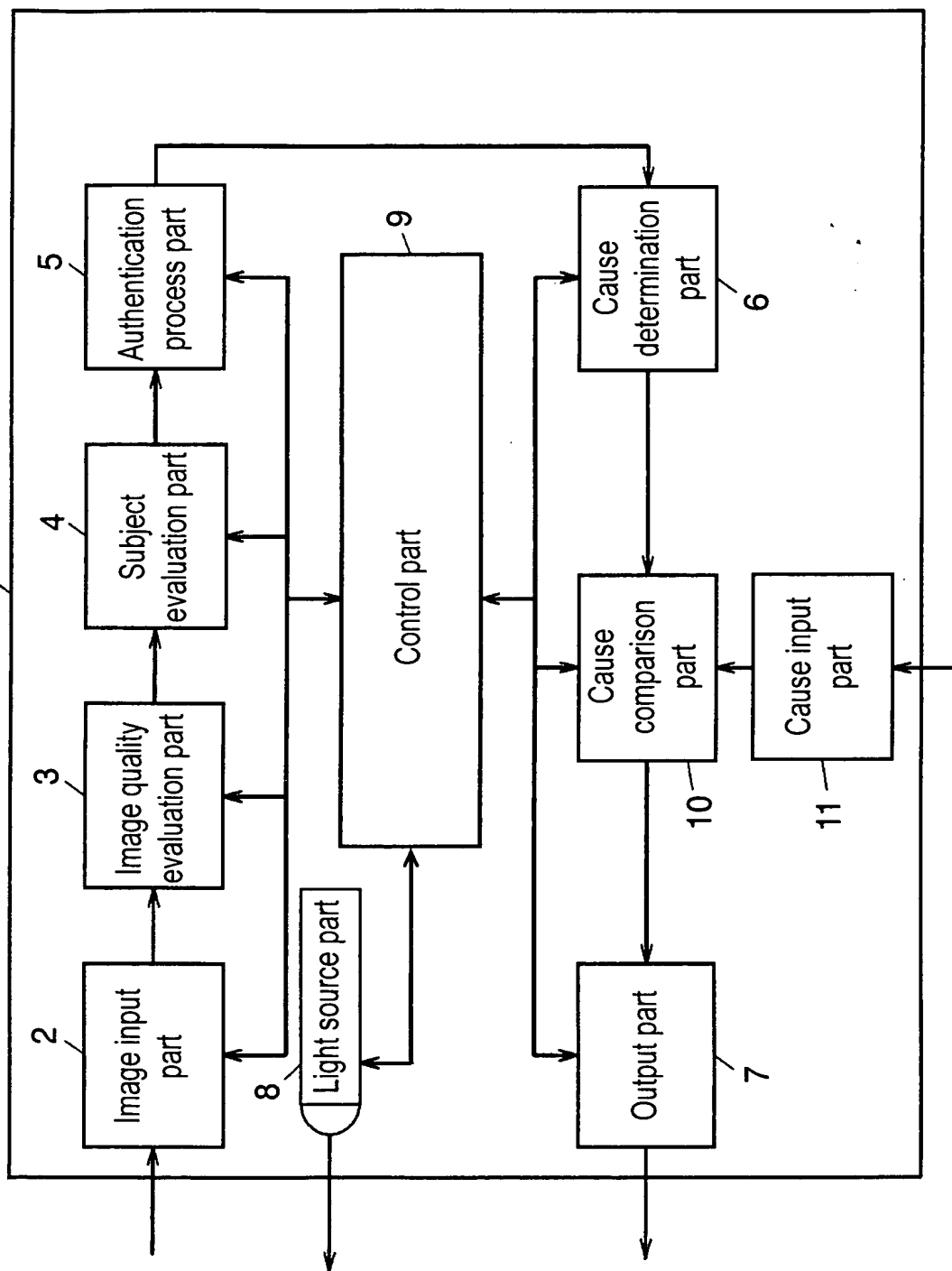
Output source	Information to be outputted	Cause of being unable to use the image for an authentication process	An example message
Degree-of-focusing calculation part 32	Information about the degree of focusing	Photographing distance is inadequate	Photograph at a distance of 10 cm
High intensity area extraction part 41	Information about the presence or absence of eyeglasses (with eyeglasses)	The eyeglasses are in focus /light reflected from the eyeglasses covers the iris area	Shift the device a little/ Take off your glasses
Eye detection part 42	Information about the presence or absence of an eye	photographed image contains no eye	Set the eye in the middle of the mirror
Pupil-iris detection part 52	Information about iris position/ information about pupil position		
Comparison and collation part 56	Information about the collation result (the other information is within the predetermined range)	Reflection of external light off the cornea	Photograph in the shade

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FIG. 8

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FIG. 9

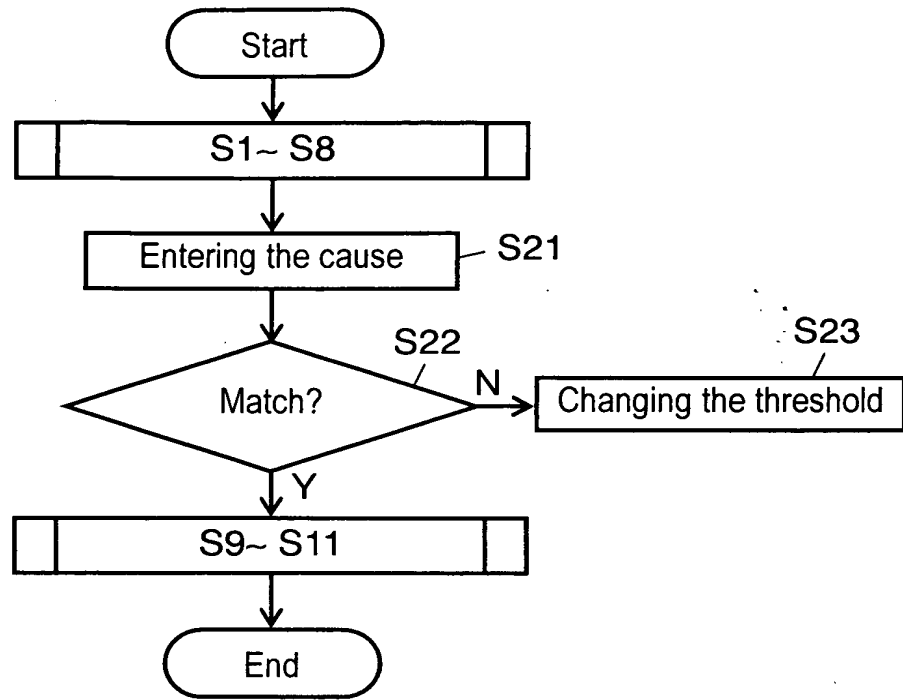


FIG. 10

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Question	Cause of image degradation in the case of "Yes"
Are you photographing outdoors?	reflection due to external light
Are you wearing glasses?	eyeglasses
Is the eye photographed?	low degree of focusing

Reference marks in the drawings

- 1, 20 Authentication device
- 2 Image input part
- 3 Image quality evaluation part
- 4 Subject evaluation part
- 5 Authentication process part
- 6 Cause determination part
- 7 Output part
- 8 Light source part
- 9 Control part
- 10 Cause comparison part
- 11 Cause input part
- 31 Intensity control part
- 32 Degree-of-focusing calculation part
- 41 High intensity area extraction part
- 42 Eye detection part
- 51 Reflected light removal part
- 52 Pupil-iris detection part
- 53 Eyelid detection part
- 54 Authentication information generation part
- 55 Storage part
- 56 Comparison and collation part
- 60 Eye image
- 61 Iris
- 62 Pupil
- 63 Reflection
- 64 High intensity area
- 90 User to be authenticated
- 91 Cause determination table
- 92 Question-cause correspondence table